

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jochen Wurtz et al.

Application No.: 09/841,820

Confirmation No.: 6300

Filed: April 25, 2001

Art Unit: 1616

For: LIQUID FORMULATIONS

Examiner: A. N. Pryor

DECLARATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Dr. Roland Deckwer, state that I reside at Königsteinerstrasse 92a, D-65929 Frankfurt/Main; I am a citizen of the Federal Republic of Germany; that I am familiar with the subject matter and the prosecution of the instant application Serial No. 09/841,820 filed April 25, 2001, entitled "Liquid Formulations"; that I consider myself qualified by my education, knowledge and experience in agricultural chemistry to make this Declaration; and that I have made the following observations:

1. The instantly claimed invention is directed to novel liquid formulations comprising a) one or more sulfosuccinate(s) of the formula (I) and b) one or more sulfonylureas in dissolved form.

2. The following tests were carried out under my supervision and direction. The tests were designed in order to supplement the formulation examples disclosed in the application and were conducted in the same manner as described in the specification.

3. Results of the supplemental formulation examples are shown in the following table:

RESULTS of Table 1 of the Application					RESULTS of supplemental formulation examples				RESULTS of Table 2 of the Application	
Recipe No. (Example No.)	Ingredient	III	VIII	IX	A Comp. III	B Comp. III	C Comp. VIII & IX	D Comp. VIII & IX	1	2
Active Ingredients	iodosulfuron	7.46	4.65	4.61	7.50	7.50	4.60	4.60	1.40	1.40
	fenoxaprop-ethyl		7.94	8.01			8.00	8.00	11.08	11.08
	mefenpyr-diethyl		3.05	3.08			3.00	3.00	4.17	4.17
Stabilizing polycarboxylic acids, e.g. sulfosuccinates	Triton GR 7 ME®	81.98	84.36		NONE	NONE	NONE	NONE	NONE	NONE
	Na-DOS			24.99						
Solvents	propylene carbonate	10.56			92.50	10.50	84.40	74.40	83.35	73.35
	Edenor MESU®			39.52						
	Solvesso 100®					62.00				
Surfactants	Scrophor CY8®			19.79						
	Genapol X-060®							10.00		10.00
	initial value (iodosulfuron)	7.32	4.31	3.14	6.99	7.68	4.22	4.31	1.29	1.35
The initial values and final values (g of iodosulfuron in the formulation) were determined by HPLC.	final value (iodosulfuron), i.e. after storage at T = 54°C, 14 days	7.31	4.17	3.07	4.59	5.68	1.93	0.19	0.32	<0.05
	Loss in %	0.1	3.2	2.2	34.3	26.0	54.3	95.6	75.2	>96.3
	Stable formulation?	YES	YES	YES	NO	NO	NO	NO	NO	NO

Abbreviations: Comp. = Results has to be compared with Recipe No. ; Names are used in the meaning defined in the original application

⊗ = In Triton GR 7 ME[®] sulfosuccinates are dissolved in a solvent equivalent to Solvesso 100[®]. When omitting sulfosuccinates this component has to be substituted. This has been done either by increasing the amount of propylene carbonate or by introducing Solvesso 100[®].

4. Discussion of Results:

The supplemental examples A and B are based on example III disclosed in the application; the component Triton GR-7M E, which contain sulfosuccinates, were replaced by the solvent propylene carbonate, which is already part of the recipe of example III (example A), or by the aromatic hydrocarbon solvent, Solvesso 100, which is also used as solvent in the component Triton GR-7M E (Triton GR-7M E is a 64%w/w solution of a sulfosuccinate in 36% of a solvent equivalent to Solvesso 100 in composition and in CAS number) (example B).

Whereas the active ingredient, Iodosulfuron, is completely chemically stable in the recipe of example III, disclosed in the application, Iodosulfuron degrades in the recipe of the examples A and B by 34.3% or 26.0% of the initial value after storage of 14 days at 54°C, respectively. The degradation of Iodosulfuron in the recipe of example B compared to example A is less, because the solvent Solvesso 100 as a pure hydrocarbon without any functional groups acts as a real inert.

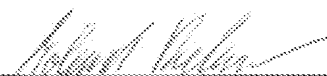
The supplemental examples C and D are based on example VIII disclosed in the application; the component Triton GR-7M E were replaced by the solvent propylene carbonate, which is already part of the recipe of example VIII (example C); in example D, additionally a wetting agent, Genapol X060, an ethoxylated alcohol, is introduced. Therefore example D is based on example VIII and example IX of the application; in example IX a wetting agent, Soprophor CY/8, an ethoxylated tristyrylphenol, is used.

Whereas the active ingredient, Iodosulfuron, is chemically stable in the recipes of example VIII and example IX, disclosed in the application, Iodosulfuron degrades in the recipe of the examples C and D by 54.3% or 95.6% of the initial value after storage of 14 days at 54°C, respectively.

The comparison of the examples A, D and C show that the introduction of further components, usually used in agrochemical formulations, like additional active ingredients (fenoxaprop-ethyl or mefenpyr-diethyl) or wetting agents (Genapol X060), leads to an accelerated chemically degradation of Iodosulfuron.

The comparison of the examples III, VIII and IX disclosed in the application with the supplemental examples A to D show clearly, that the presence of sulfosuccinates inhibit the chemical degradation of iodosulfuron. This is the case for the straight solution of iodosulfuron and sulfosuccinates in a suitable solvent (example III vs. example A or D), where iodosulfuron may degrade by the solvent or by its own impurities, and also if further components, usually used in agrochemical formulations, are introduced in the formulation (example VIII or IX vs. example C or D).

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing there from.

Signed: 

Name: Dr. Roland Deckwer

Date: June 30, 2010